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Abstract

There is an interest in the evaluation of foliar fungicides since Asian soybean rust was discovered in the continental United States. Fungicides have been evaluated for their effectiveness against leaf diseases and for their potential yield enhancement when diseases are not present.

Disciplines

Agricultural Science | Agriculture

Soybean Variety by Fungicide Demonstration at the Northwest Research Farm

Paul Kassel, extension field specialist/crops

Introduction

There is an interest in the evaluation of foliar fungicides since Asian soybean rust was discovered in the continental United States. Fungicides have been evaluated for their effectiveness against leaf diseases and for their potential yield enhancement when diseases are not present.

Materials and Methods

This experiment evaluated the effectiveness of Headline fungicide on four different soybean varieties. The varieties were chosen for their yield potential.

The varieties included Asgrow AG2403, Pioneer 92M32, Northrup King S23-Z3, and Kruger 223+RR. Four replications were established on May 23 and the planting rate was 151,000 seeds/acre. Headline fungicide was applied on July 21, 2006 with 15004 double outlet flat fan nozzles at 40 psi and 20 gal/acre. The soybean plants were at the R2 to R3 stage of development (full flower to early pod development stage).

Results and Discussion

Foliar diseases were evaluated on August 17, 2006. There were brown spot and bacterial blight in all varieties, but at very low levels. There was very little difference in maturity timing among treatments.

There was a trend for increased yields with the Headline treatment. The yield increase was an average of 2.9 bushels/acre for the Headline fungicide treatment across all four varieties. The yield difference due to Headline was not significant at the 5% confidence level. The yields for the varieties ranged from 60.9 to 62.6 bushels/acre without fungicide and 64.7 to 65.4 bushels/acre with one application of Headline.

Acknowledgments

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Table 1. Soybean yield by variety with and without Headline fungicide, Northwest Research Farm, 2006.

Variety	Headline	Treatments				Avg.
		I	II	III	IV	
-----bu/a @13%-----						
Asgrow	Yes	65.1	63.5	66.4	64.3	64.8
AG2403	No	60.4	62.1	63.4	64.0	62.5
Pioneer	Yes	61.6	65.3	66.9	65.5	64.8
92M32	No	61.1	60.3	62.8	66.2	62.6
Northrup King	Yes	64.2	64.9	67.1	62.7	64.7
	S23-Z3 No	59.3	61.7	60.4	62.0	60.9
Kruger	Yes	62.6	65.7	64.5	68.6	65.4
	223+RR No	58.9	60.6	62.7	65.0	61.8